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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,109	10/31/2006	Eric Allain	10674.204-US	1362
25908 7590 09/23/2010 NOVOZYMES NORTH AMERICA, INC. 500 FIFTH AVENUE SUITE 1600 NEW YORK, NY 10110			EXAMINER PAK, YONG D	
			ART UNIT 1652	PAPER NUMBER
			NOTIFICATION DATE 09/23/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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Patents-US-NY@novozymes.com

ADVISORY ACTION

This application is a 371 of PCT/US05/01147.

Response to Arguments

The amendment filed on September 7, 2010 under 37 CFR 1.116 in reply to the final rejection has been considered and has been entered but is not deemed to place the application in condition for allowance because: the request for consideration does not overcome the rejection of claims 52-53 and 55-63 under 35 U.S.C. 103(a) as being unpatentable over Veit et al., Svendsen et al. and Nagasaka et al., as discussed below.

Claims 52-63 are pending and are under consideration.

Claim Rejections - 35 USC § 103 - Maintained

Claims 52-53 and 55-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veit et al., Svendsen et al. and Nagasaka et al.

In response to the previous Office Action, applicants have traversed the above rejection.

Applicants argue that Veit et al. do not teach or suggest a process of producing ethanol comprising saccharification of raw starch (i.e. ungelatinized starch). Examiner respectfully disagrees. First, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re*

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Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Second, claim 52 recites the limitation that the saccharifying step is at a temperature below the initial gelatinization temperature. Therefore, the claimed method does is not necessarily drawn to a method of saccharification of raw starch (i.e. ungelatinized starch). Further, Nagasaka et al. discloses saccharification of raw starch (i.e. ungelatinized starch) (page 451).

Applicants also argue that Veit et al. do not disclose a process for producing ethanol by saccharification and fermentation at a temperature between 28° and 36°C. Examiner respectfully disagrees. First, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Second, Veit et al. discloses ethanol by saccharification and fermentation at a temperature between 28° and 36°C (Column 5, lines 25-52). Further, Nagasaka et al. discloses saccharification of raw starch (i.e. ungelatinized starch) at 30°C.

Applicants argue that Svendsen et al. do not teach or suggest a hybrid alpha-amylase comprising an *A. niger* acid alpha-amylase catalytic domain and a carbohydrate-binding module from *A. kawachi* alpha-amylase. First, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA

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1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Second, according to MPEP 2144.01, "[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." Since Svendsen et al. discloses a method designing alpha-amylase hybrids comprising of two different acid alpha-amylases, such as an *A. niger* acid alpha-amylase and many fungal acid alpha-amylases, including the alpha-amylase from *A. kawachii* (Kaneko et al. *J. of Fermentation & Bioengineering*, Vol. 81, No. 4, 292-298, 1996 – form PTO-892) were available to one having ordinary skill in the art, one of ordinary skill in the art at the time the invention was made would have been motivated to use other hybrid alpha-amylases in order to optimize production of the fermentation product. The temperature of saccharification and fermentation is taught/disclosed by Veit et al. and Nagasaka et al.

Applicants argue that Nagasaka et al. do not teach or suggest the claimed process because Nagasaka et al. does not disclose a glucoamylase with at least 98% sequence identity with SEQ ID NO:2 and the claimed hybrid alpha-amylase. Examiner respectfully disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The instant rejection is not an anticipatory rejection, but an obviousness rejection on the combined teachings of Veit et al., Nagasaka et al., and Svendsen et al.

Hence the rejection is **maintained**.

Conclusion

Claim 52-53 and 55-63 are rejected.

Allowable Subject Matter

Claim 54 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Pak whose telephone number is 571-272-0935. The examiner can normally be reached 6:30 A.M. to 5:00 P.M. Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Mondesi can be reached on 571-272-0956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

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/Yong D Pak/
Primary Examiner, Art Unit 1652